Intake of trans fat and all-cause mortality in the Reasons for Geographical and Racial Differences in Stroke (REGARDS) cohort.

BACKGROUND: A high intake of trans fatty acids decreases HDL cholesterol and is associated with increased LDL cholesterol, inflammation, diabetes, cancer, and mortality from cardiovascular disease. The relation between trans fat intake and all-cause mortality has not been established.

OBJECTIVE: The aim of this study was to determine the relation between trans fat intake and all-cause mortality.

DESIGN: We used data from the Reasons for Geographic and Racial Differences in Stroke (REGARDS) study-a prospective cohort study of white and black men and women residing in the continental United States. Energy-adjusted trans fat intake was categorized into quintiles, and Cox-regression was used to evaluate the association between trans fat intake and all-cause mortality.

RESULTS: During 7 y of follow-up, there were 1572 deaths in 18,513 participants included in REGARDS. From the first to the fifth quintile of trans fat intake, the mortality rates per 1000 person-years of follow-up (95% CIs) were 12.8 (11.3, 14.5), 14.3 (12.7, 16.2), 14.6 (13.0, 16.5), 19.0 (17.1, 21.1), and 23.6 (21.5, 25.9), respectively. After adjustment for demographic
factors, education, and risk factors for mortality, the HRs (95% CIs) for all-cause mortality were 1.00, 1.03 (0.86, 1.23), 0.98 (0.82, 1.17), 1.25 (1.05, 1.48), and 1.24 (1.05, 1.48), respectively (P-trend = 0.004). The population attributable risk due to trans fat intake was 7% (95% CI: 5%, 8%).

CONCLUSION: Higher trans fat intake is associated with an increased risk of all-cause mortality.

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